Agenda Item No. 7

File Code No. 540.13

CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: February 1, 2011

TO: Mayor and Councilmembers

FROM: Facilities Division, Public Works Department

SUBJECT: Introduction Of Ordinance For Power Purchase Agreement For Cogeneration Project At El Estero Wastewater Treatment Plant

RECOMMENDATION:

That Council introduce and subsequently adopt, by reading of title only, An Ordinance of the Council of the City of Santa Barbara Approving and Authorizing the City Administrator to Negotiate and Execute a Power Purchase Agreement (PPA), in a Form of Agreement Acceptable to the City Attorney, for a Term of up to Ten (10) Years for Cogeneration at the El Estero Wastewater Treatment Plant (El Estero) Between the City of Santa Barbara and California Power Partners, Incorporated (Calpwr), for the Purchase of Electricity.

DISCUSSION:

As a part of the wastewater treatment process, El Estero operates two digesters that produce methane gas (digester gas). The digester gas is currently used for plant heating operations with a small portion being used by the underperforming fuel cell cogeneration system. Approximately 100,000 ft^3/day of the gas is not utilized and is burned at a waste gas flare.

The existing generating system consists of two fuel cells, and is operated by Alliance Monterey, LLC (Alliance) under a PPA. The system was running at a small percentage of its rated capacity for the last few years due to problems with contaminants in the digester gas supply. Both Alliance and City staff agreed that the existing system is not performing adequately and that the removal of the system and termination of the power purchase is in the best interest of all concerned. The system was taken offline November 1, 2010.

In September 2010, staff received approval from Council to issue a request for proposals to firms who would design, build, and operate a new cogeneration facility at the El Estero site, in order to continue using the digester gas supply at the facility. Public Works staff evaluated proposals from four qualified firms to construct, operate, and sell electricity and provide waste heat to the facility with an engine cogeneration system.

A panel of City staff reviewed all of the proposals and unanimously recommended proceeding with the Calpwr proposal. Calpwr's proposal offers a 700kW Guascor engine system with a robust gas treatment system and guarantees 95% run-time, based on the volume of gas provided by the City. Calpwr can also accommodate the emissions limits as set forth by the Air Pollution Control District.

Staff has subsequently negotiated an agreement with Calpwr for the purchase of energy. Some of the key terms of the contract are summarized below:

- The term of the proposed agreement is 10 years.
- The proposed cost for electricity generated by the engine is $0.0849/kWh for a ten-year period.
- There is no capital or operating cost to the City for this project. Calpwr will recover their investment through energy sales over the term of the contract.
- At the end of the agreement term, the City can renegotiate a contract continuation or Calpwr will remove the engine units from the site at their cost.

BUDGET/FINANCIAL INFORMATION:

The project will not require funding from City sources. All design, construction, and operating costs will be paid by the selected firm. The cost of the electricity purchased by the City through the power purchase agreement will be at or below the cost of electricity purchased from the electrical utility.

At the current cost of electricity, the City's purchase of electricity from this project for the El Estero Plant should save about $55,000 per year.

SUSTAINABILITY IMPACT:

The engine cogeneration system will use the majority of the biogas produced by El Estero, providing electricity and heat for plant operations from a renewable resource. Much of the existing biogas produced by the plant is currently being wasted through a flaring process.

PREPARED BY: Jim Dewey, Facilities & Energy Manager/AP/cce

SUBMITTED BY: Christine F. Andersen, Public Works Director

APPROVED BY: City Administrator's Office